AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A 3D image reproduction apparatus comprising:

a display including a screen on which a plurality of pixels are arranged to display synthesis parallax images in units of arrayed sub regions, wherein each of the pixels includes three sub pixels that differ in color, [[and]] the sub pixels are laid out so that adjacent sub pixels differ in color, and parallax information is assigned to each of the sub pixels in units of horizontally arranged sub pixels; and

an optical system arranged in front of the screen of the display, forming a 3D image from synthesis parallax images displayed on the screen in units of arrayed sub regions.

2. (Original) An apparatus according to claim 1, wherein the synthesis parallax images comprise images raytraced in units of the sub pixels.

3. (Original) An apparatus according to claim 1, wherein the synthesis parallax images comprise images synthesized from a plurality of parallax images in units of the sub pixels.

4. (Original) An apparatus according to claim 1, wherein the optical system comprises a pinhole array in which pinholes are arranged corresponding to the arrayed sub regions.

5. (Original) An apparatus according to claim 1, wherein the optical system comprises a slit array in which slits are arranged corresponding to the arrayed sub regions.

6. (Original) An apparatus according to claim 1, wherein the optical system comprises a microlens array in which micro lenses are arranged corresponding to the arrayed sub regions.

7. (Original) An apparatus according to claim 1, wherein the optical system comprises a lenticular sheet in which lenses are arranged corresponding to the arrayed sub regions.

8. (Original) An apparatus according to claim 1, wherein sub pixels of the same color are laid out in a V-shaped pattern.

9. (Currently amended) A 3D image reproduction apparatus comprising:

a display including a screen on which a plurality of pixels are arranged to display synthesis parallax images in units of arrayed sub regions, wherein each of the pixels includes three sub pixels that differ in color, the sub pixels having respectively

rectangles extending in a substantially vertical direction of the screen, [[and]] the sub pixels are laid out so that adjacent sub pixels differ in color, and parallax information is assigned to each of the sub pixels in units of horizontally arranged sub pixels; and

an optical system arranged in front of the screen of the display, forming a 3D image from synthesis parallax images displayed on the screen in units of arrayed sub regions.

10. (Original) An apparatus according to claim 9, wherein the synthesis parallax images comprise images raytraced in units of the sub pixels.

11. (Original) An apparatus according to claim 9, wherein the synthesis parallax images comprise images synthesized from a plurality of parallax images in units of the sub pixels.

12. (Original) An apparatus according to claim 9, wherein the optical system comprises a pinhole array in which pinholes are arranged corresponding to the arrayed sub regions.

13. (Original) An apparatus according to claim 9, wherein the optical system comprises a slit array in which slits are arranged corresponding to the arrayed sub regions.

14. (Original) An apparatus according to claim 9, wherein the optical system comprises a microlens array in which micro lenses are arranged corresponding to the arrayed sub regions.

15. (Original) An apparatus according to claim 9, wherein the optical system comprises a lenticular in which lenses are arranged sheet corresponding to the arrayed sub regions.

16. (Original) An apparatus according to claim 9, wherein sub pixels of the same color are laid out in a V-shaped pattern.

17. (New) An apparatus according to claim 1, wherein sub pixels of the same color are laid out in a diagonal pattern.

18. (New) An apparatus according to claim 9, wherein sub pixels of the same color are laid out in a diagonal pattern.